



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,968	12/18/2000	Masahiko Sugimoto	1982-0161P	9946

2292 7590 09/13/2004

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

JERABEK, KELLY L

ART UNIT	PAPER NUMBER
----------	--------------

2612

DATE MAILED: 09/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/737,968	Applicant(s) SUGIMOTO ET AL.	
	Examiner Kelly L. Jerabek	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/18/2000</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-20 rejected under 35 U.S.C. 102(e) as being anticipated by

Hashimoto US 6,704,054.

Re claim 1, Hashimoto discloses in figure 1 an electronic image pickup apparatus for forming an image of an object. The electronic image pickup apparatus includes a focusing lens group (3) that is movable along an optical axis in order to focus an image of a subject and an image sensor (5) for forming a subject image (col. 4, lines 38-50). A focus motor (22) is provided in order to move the focusing lens group (3) along the optical axis to an in-focus state (col. 7, lines 43-53). In addition, the electronic image pickup apparatus includes a central processing unit (15) that is electronically connected to both the image sensor (5) and the focus motor (22) as shown in figure 1. The CPU

Art Unit: 2612

(15) carries out infrared active AF processing in order to detect the distance between the pickup apparatus and a subject (col. 8, lines 11-28). The CPU (15) then compares the detected subject distance with a predetermined value and performs autofocus processing in a first range or a second range depending on whether the detected distance is greater or less than the predetermined value (col. 8, lines 28-52). Therefore, it can be seen that the program logic (autofocus processing) of the CPU (15) is performed in accordance with predetermined conditions (subject distance from imager) stored in memory. When the CPU (15) performs autofocus processing in both the first range and the second range, the CPU (15) determines a start point of a search for an in-focus position and controls the motor (22) to move the focusing lens group (3) from the start point until an in-focus position is reached based on analyzing electronic information received from the image sensor (5) (AF processing in second range: col. 9, line 52 – col. 10, 67; AF processing in first range: col. 11, lines 15-52).

Re claim 2, Hashimoto discloses in figure 4 the series of operation of the focus lens group (3) when the AF processing is in the second range corresponding to the subject distance being longer than a predetermined distance. The focus lens group (3) is first shifted from position (A) to the calculated start position (B) and the focus lens group (3) continues to move in the forward direction until it reaches the stop position (C). Finally, the focus lens group (3) is moved backward to the in-focus position (D) (col. 10, lines 58-67). Therefore, it can be seen that the focusing lens is movable forward and backward along the optical axis and the program logic determines in

accordance with the predetermined conditions to search one of forward and back from the start point along the optical axis for an in-focus position.

Re claim 3, Hashimoto states that the CPU (15) compares a detected subject distance with a predetermined value and performs autofocus processing in a first range or a second range depending on whether the detected distance is greater or less than the predetermined value (col. 8, lines 28-52).

Re claim 4, Hashimoto states that during autofocus processing, once the focus lens group (3) reaches the calculated stop position, the CPU (15) calculates an in-focus position (col. 10, lines 45-55).

Re claim 5, Hashimoto states that if the focus lens group (3) has not reached the stop position (lens is not yet in an in-focus position) the CPU (15) obtains an AF evaluation value and moves the focus lens group (3) by a predetermined amount (col. 10, lines 30-44). Therefore, if the focus lens group (3) has not yet reached the stop position (search for an in-focus position unsuccessful) the program logic controls the motor to move the focusing lens to a predetermined position.

Re claim 6, Hashimoto states that the CPU (15) performs autofocus processing based on predetermined conditions (subject distances) that are determined by infrared active AF processing (col. 8, lines 4-52). The predetermined conditions (subject

distances) include a situation where the subject is close to the imaging apparatus such that the distance calculated by the infrared active AF processing is less than a predetermined distance (first range) and a situation where the subject is farther from the imaging apparatus such that the distance calculated by the infrared active AF processing is longer than a predetermined distance (second range) (col. 9, lines 22-48). Therefore, the predetermined conditions include at least a close-up mode (first range) and a landscape mode (second range). Additionally, Hashimoto states that the infrared active AF technique can be implemented even if the environment is in a low luminance condition (col. 1, lines 54-64). Therefore, the predetermined conditions may also include a night scene mode for low luminance conditions.

Re claim 7, depending on the result of the infrared active AF processing the CPU (15) performs autofocus processing in a first range or a second range depending on whether the detected distance is greater or less than the predetermined value (col. 8, lines 28-52). Figure 3 discloses autofocus processing in the second range corresponding to a subject being located relatively far away from the imaging apparatus. In steps S16 and S17 an in-focus position is calculated and the focus lens group (3) is drive to that position (col. 10, lines 45-55). Figure 5 discloses autofocus processing in the first range corresponding to a subject being located relatively close to the imaging apparatus. In steps S26 and S 27 an in-focus position is calculated and the focus lens group (3) is drive to that position (col. 11, lines 45-52). Therefore, it can be seen that an in-focus position is predetermined to be at one of a close position corresponding to the

first range and a far position corresponding to the second range. Also, when autofocus processing is performed in the first range corresponding to a subject being located relatively close to the imaging apparatus the start value is obtained by subtracting a value G_s from a set value representing the infrared result and further subtracting a variable G_p (col. 11, lines 19-30). The subject distance calculated through the infrared active AF processing is clearly shorter for first range than for the second range (col. 9, lines 33-48). Therefore, it can be seen in figure that when the in-focus position is predetermined to be at the close position side (first range) the start point (B) is the close position (subject distance calculated through the infrared active AF processing - G_s - G_p) and the search proceeds toward the far position when the focusing lens (3) moves from point B to point C. Furthermore, when autofocus processing is performed in the second range corresponding to a subject being located relatively far from the imaging apparatus the start value is obtained by subtracting a value G_s from a set value representing the infrared result (col. 9, lines 58-61). Therefore, it can be seen that when the in-focus position is predetermined to be at the far position side (second range) the start point (B) is the far position (subject distance calculated through the infrared active AF processing - G_s) and the search proceeds toward the close position when the focusing lens (3) moves from point C to point D.

Re claim 8, see claim 1.

Re claim 9, see claim 2.

Re claim 10, see claim 3.

Re claim 11, see claim 4.

Re claim 12, see claim 5.

Re claim 13, see claim 6.

Re claim 14, see claim 7.

Re claim 15, Hashimoto states that the electronic imaging apparatus includes a CPU (15). The CPU (15) includes a recording medium (25) that stores programs from implementing various control functions (col. 5, lines 30-34). For the rest of claim 15, see claim 1.

Re claim 16, Hashimoto states that the electronic imaging apparatus includes a CPU (15). The CPU (15) includes a recording medium (25) that stores programs from implementing various control functions (col. 5, lines 30-34). For the rest of claim 16, see claim 2.

Art Unit: 2612

Re claim 17, Hashimoto states that the electronic imaging apparatus includes a CPU (15). The CPU (15) includes a recording medium (25) that stores programs from implementing various control functions (col. 5, lines 30-34). For the rest of claim 17, see claim 3.

Re claim 18, Hashimoto states that the electronic imaging apparatus includes a CPU (15). The CPU (15) includes a recording medium (25) that stores programs from implementing various control functions (col. 5, lines 30-34). For the rest of claim 18, see claim 4.

Re claim 19, Hashimoto states that the electronic imaging apparatus includes a CPU (15). The CPU (15) includes a recording medium (25) that stores programs from implementing various control functions (col. 5, lines 30-34). For the rest of claim 19, see claim 5.

Re claim 20, Hashimoto states that the electronic imaging apparatus includes a CPU (15). The CPU (15) includes a recording medium (25) that stores programs from implementing various control functions (col. 5, lines 30-34). For the rest of claim 20, see claim 6.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Naoya (JP 406167649) discloses optical equipment. The information disclosed in this document regarding reducing time required to obtain an in-focus screen is pertinent material.

Contacts


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is 703-305-8659. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for submitting all Official communications is 703-872-9306. The fax phone number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at 703-746-3059.

Art Unit: 2612

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLJ



NGOC-YEN VU
PRIMARY EXAMINER